NWS FORM E-5 (11-88) **(PRES. by NWS Instruction 10-924)** **U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE**	HYDROLOGIC SERVICE AREA (HSA) **WFO Jackson, Mississippi**
MONTHLY REPORT OF HYDROLOGIC CONDITIONS	REPORT FOR: MONTH **October** YEAR **2013**
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283	SIGNATURE **Alan E. Gerard, Meteorologist In-Charge** DATE **11/27/2013**

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

X **An X inside this box indicates that no river flooding occurred within this hydrologic service area.**

Synopsis...

October was a month of below normal precipitation across the Hydrologic Service Area, HSA, with the exception of the Delta region where above normal rainfall fell. Greenville is now above the normal yearly rainfall again through the month of October, as all remaining ASOS sites have been for the entire year. Temperature-wise, the average monthly temperature at all ASOS sites was slightly above to above normal. Vicksburg was the coolest location with only 0.3 degrees above its average monthly temperature and Hattiesburg was the warmest with 2.1 degrees above average.

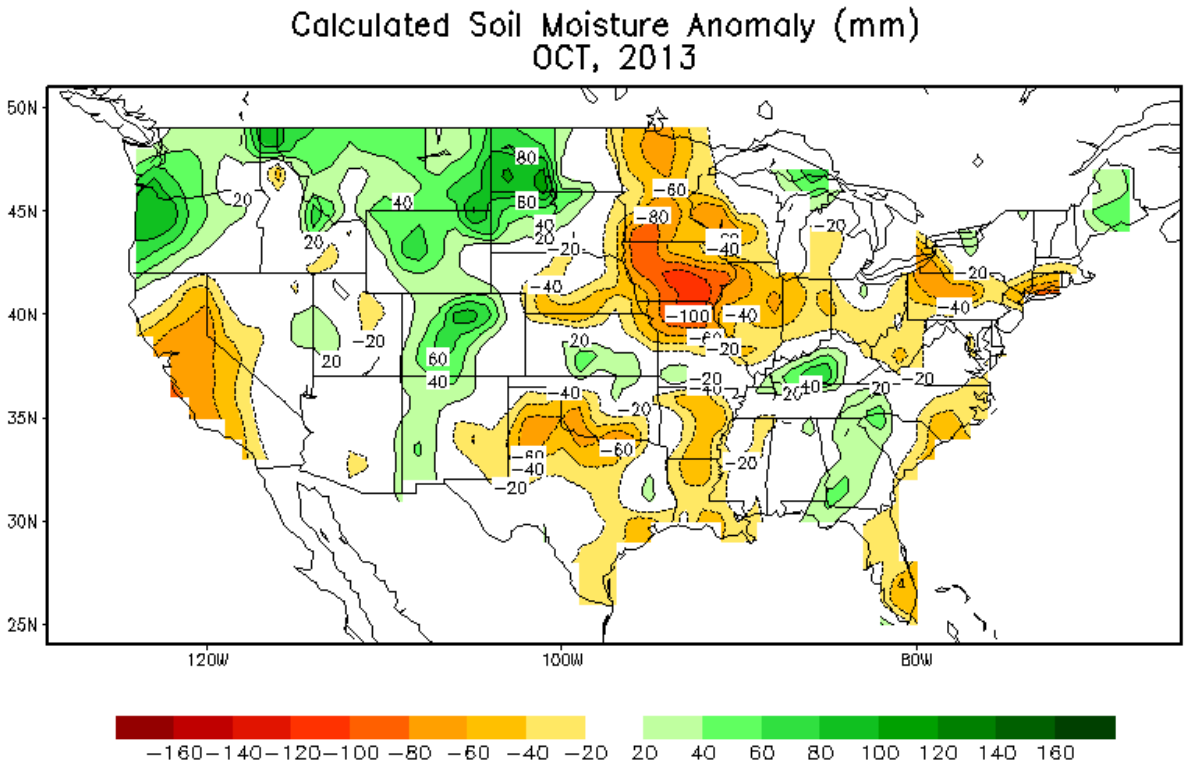
The month started out with scattered storms across the HSA. A low pressure system developed in the Gulf of Mexico early in the month and traveled slowly northward towards the U.S. Central Gulf Coast. The system evolved into Tropical Storm Karen and as it trekked northward, it ran into dry air and strong wind shear (both detrimental to hurricane formation). A frontal system that moved through Louisiana and Mississippi on the 6th pushed Tropical Storm Karen to the east before it made landfall, so that only the very outer rain bands of Karen affected southern Mississippi.

The next few days stayed dry. Another seasonal front approached the region on the 13th and dropped rain in Louisiana, Arkansas, and far western Mississippi. The front dried up and washed out the next day though and did not make it through the rest of the HSA. In typical autumn-like progression, another low pressure system quickly developed in the Central Plains and traveled northeastward with a dragging front. This boundary proceeded through the HSA on the 17th and then stalled out in Southeast Mississippi. Scattered rainfall, associated with the stalled boundary, continued to fall in Southeast Mississippi and Louisiana through the 18th and 19th until another quickly advancing front pushed through the ArkLaMiss and pushed the stalled front off to the east.

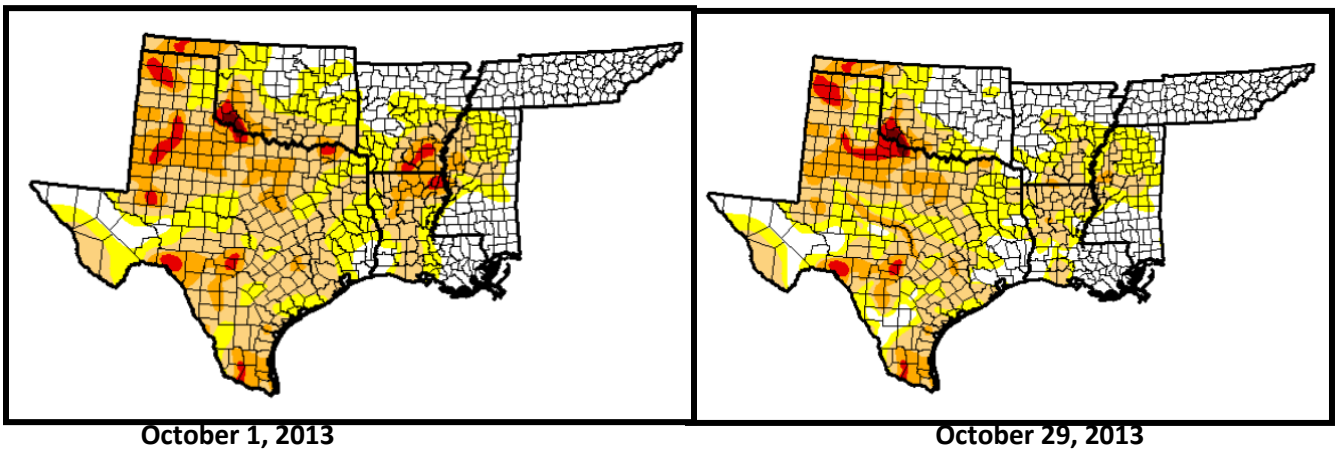
A couple more fronts approached the HSA during the next week but, with high pressure in control, the HSA stayed mostly dry during that time. A shortwave disturbance developed in eastern Texas on the 27th and progressed into the Mid-South by the next day. Meanwhile, it dropped a little bit of rain over Mississippi and Louisiana. High pressure and easterly flow quickly became dominant after this system moved swiftly on its way. One more front approached ArkLaMiss before the month's end and produced some very heavy rainfall in Louisiana and Arkansas and only minor rainfall in Mississippi.

River and Soil Conditions...

Soil Moisture Map:

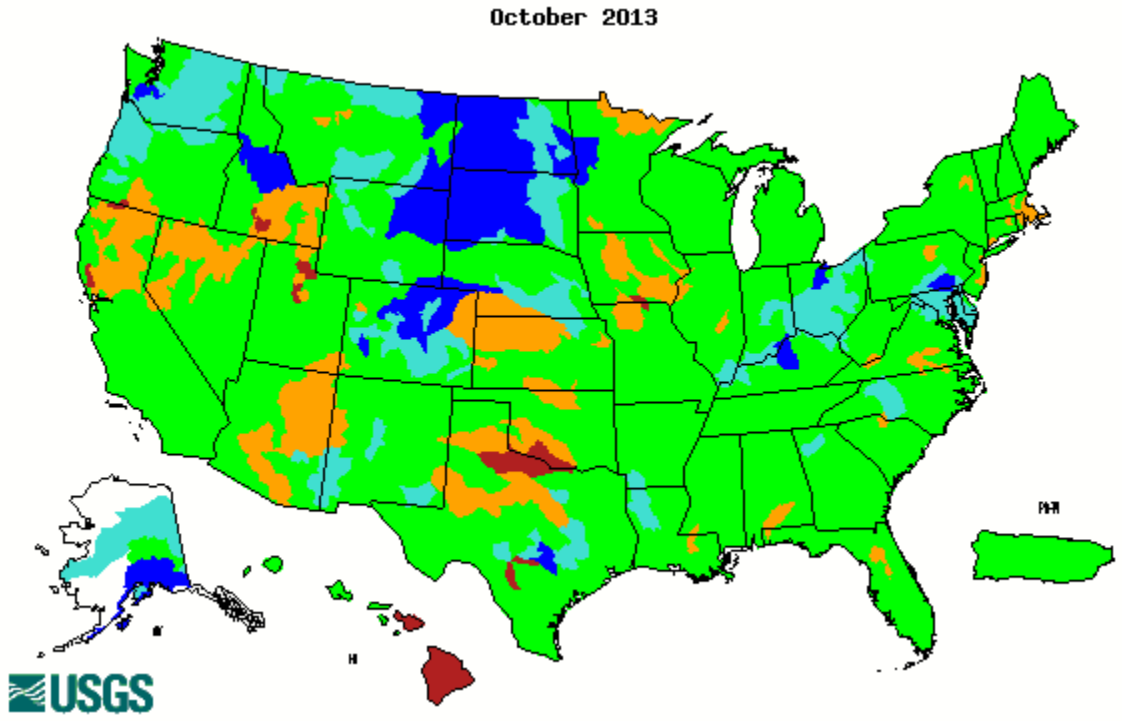


Drought Monitor Comparison:



October 1, 2013 **October 29, 2013**

Streamflow:
The United States Geological Survey's (USGS) October 2013 river streamflow records were compared with all historical October streamflow records. Streamflow was normal across all of the Jackson HSA in Mississippi, Louisiana, and Arkansas.

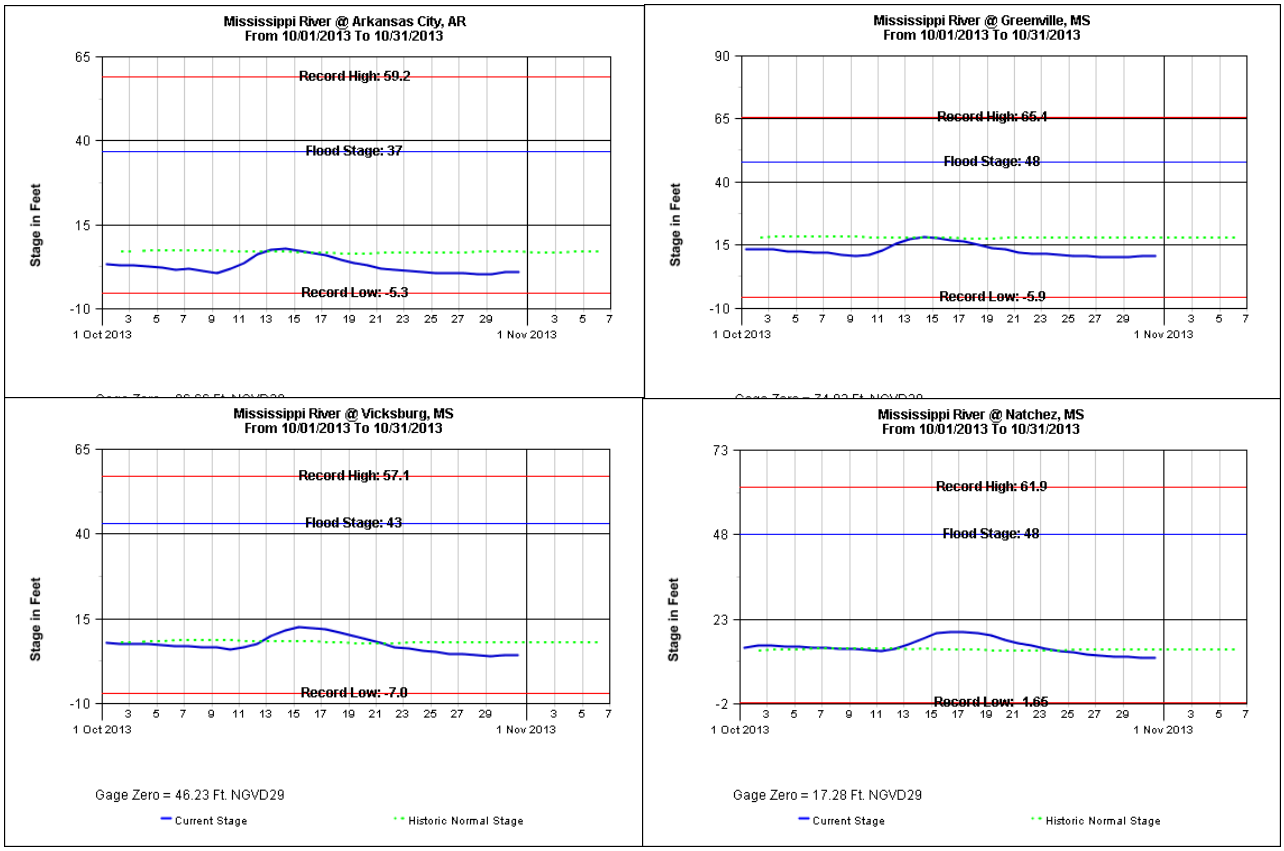


River Conditions:
No flooding occurred along the river systems in the HSA. Rivers experienced only a few minors during the month of October. The Mississippi River from Arkansas City to Natchez fell for the first third of the month before rising, peaking slightly above the monthly normal, and then fell again through the remainder of the month.

Climatic Outlook and Flood Potential:
The climatic outlook shows a slightly above chance for temperatures and equal chances for above, below, and normal precipitation over the next 3 months. Based on current soil moisture, streamflow, and the 3-month weather outlook, the flood potentials are as follows:

Pearl River System: Average.
Yazoo River System: Average.
Big Black River System: Average.
Homochitto River System: Average.
Pascagoula River System: Average.
Northeast LA and Southeast AR: Average.
Tombigbee River System: Average.
Mississippi River: Average.

Mississippi River Plots October 2013
Plots courtesy of the United States Army Corps of Engineers



Monthly Preliminary High and Low Stages:

Location	Flood Stage (ft)	High Stage (ft)	Date	Low Stage (ft)	Date
Arkansas City	37	8.13	10/14	0.33	10/28
Greenville	48	18.29	10/14	10.10	10/28
Vicksburg	43	12.69	10/15	4.06	10/29
Natchez	48	19.40	10/16	11.65	10/31

Rainfall for the Month of October:

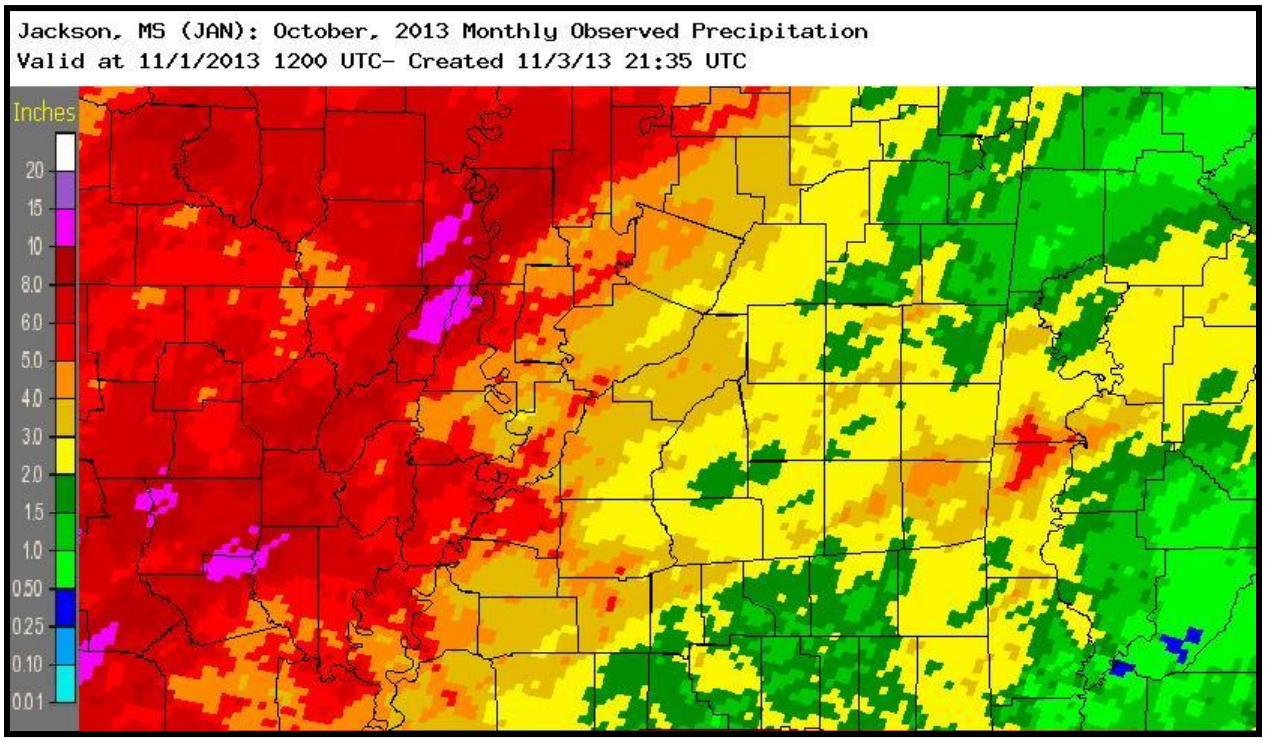
The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on September 30th until 7 am on October 31st were:

7.95 inches at Oak Grove, LA; 7.77 inches at Eudora, AR; 7.33 inches at Portland, AR; 7.11 inches at Stoneville, MS; 6.57 inches at Pioneer, LA; 6.34 inches at Dermott, AR; and 6.07 inches at Bastrop, LA

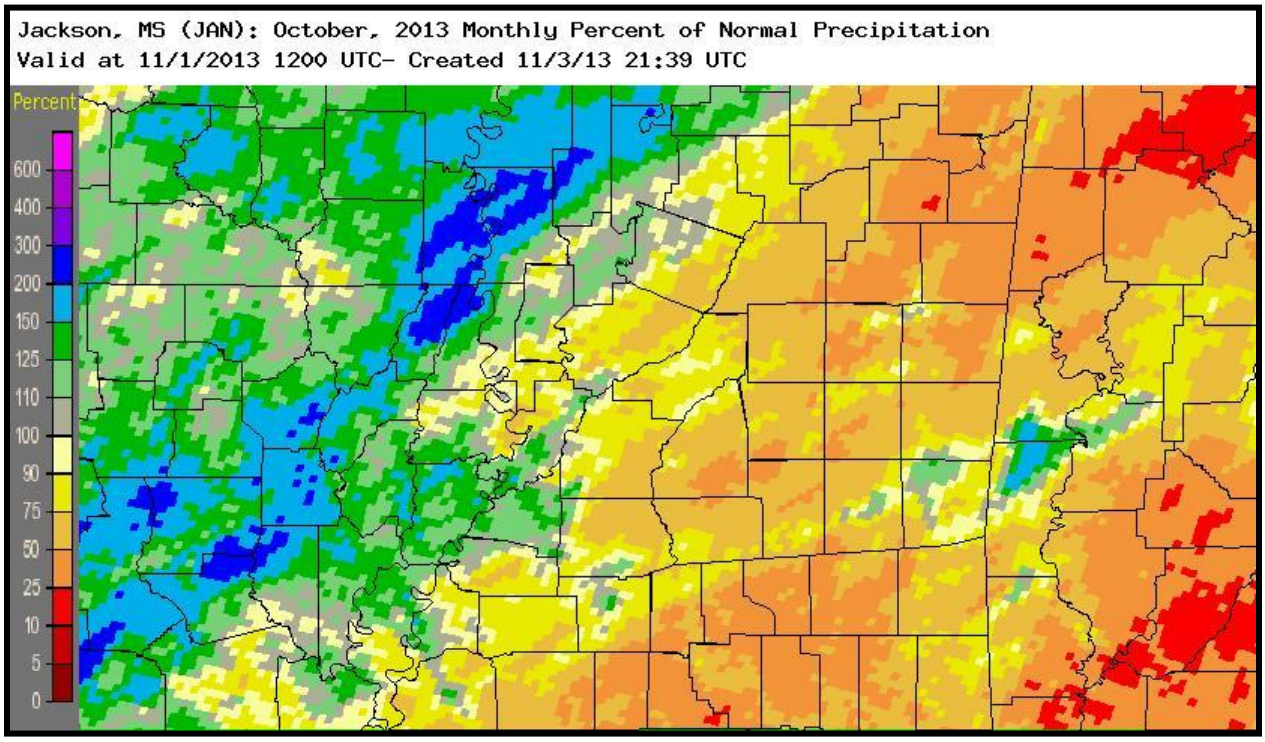
Some lesser monthly amounts:

0.49 inches at Sumrall, MS; 0.50 inches at Mississippi State University, MS; 0.71 inches at Macon, MS; 0.72 inches at Raleigh, MS; 0.78 inches at Laurel, MS; 0.88 Inches at Hattiesburg, MS; 0.95 inches at Purvis, MS; 0.96 inches at Louisville

October Rainfall Estimates:



Percent of Normal Precipitation:



Note: Observer rainfall and MPE may differ due to time differences.

October Rainfall for Selected Cities:

City (Airport)	Rainfall	Departure from Normal	2013 Rainfall	2013 Departure from Normal
Jackson (KJAN)	2.10	-1.82	53.13	+8.90
Meridian (KMEI)	2.90	-0.86	55.15	+9.00
Greenwood (KGWO)	3.38	-0.49	49.72	+8.12
Greenville (KGLH)	8.07	+3.75	44.78	+2.82
Hattiesburg (KHBG)	1.30	-2.45	58.51	+8.52
Vicksburg (KTVR)	3.55	-1.12	57.35	+13.22

Total Flood Warning products issued: 0
Total Flood Statement products issued: 0
Total Flood Advisories MS River : 0
Daily Climate and Ag WX Products (AGO'S) issued: 31
Daily CoCoRaHS Rainfall Products (LCO'S) issued: 31
Daily River and Lake Summary Products (RVD'S) issued: 31

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Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District